

Title (en)

METHOD FOR ASSESSING DIFFERENTIATION STATE OF CELLS AND GELATIN NANOPARTICLES

Title (de)

VERFAHREN ZUR BEURTEILUNG DES DIFFERENZIERUNGSZUSTANDS VON ZELLEN UND GELATINENANOPARTIKELN

Title (fr)

PROCÉDÉ D'ÉVALUATION DE L'ÉTAT DE DIFFÉRENCIATION DE CELLULES ET DE NANOPARTICULES DE GÉLATINE

Publication

EP 3992301 A4 20220720 (EN)

Application

EP 19935362 A 20190628

Priority

JP 2019025952 W 20190628

Abstract (en)

[origin: EP3992301A1] The purpose of the present invention is to provide: a method which is for assessing the differentiation state of cells and by which the differentiation state of a wide variety of cells can be assessed; and gelatin nanoparticles which can be used in said method. The purpose is achieved by a method for assessing the differentiation state of cells, the method comprising a step for observing the expression of pyruvate dehydrogenase kinase 1 (PDK1) or mRNA (Pdkl) encoding pyruvate dehydrogenase kinase 1 in cells. Said method can be carried out by using gelatin nanoparticles which are used for assessing the differentiation state of cells and carry a probe capable of detecting Pdkl or PDK1.

IPC 8 full level

C12Q 1/6813 (2018.01); **C12Q 1/32** (2006.01); **G01N 33/50** (2006.01); **G01N 33/543** (2006.01); **G01N 33/58** (2006.01)

CPC (source: EP US)

C12Q 1/32 (2013.01 - EP US); **C12Q 1/6813** (2013.01 - EP); **C12Q 1/6881** (2013.01 - EP US); **G01N 33/5091** (2013.01 - EP); **G01N 33/54346** (2013.01 - EP US); **G01N 33/587** (2013.01 - EP US); **C12Q 2600/158** (2013.01 - EP US); **G01N 2333/912** (2013.01 - EP US)

C-Set (source: EP)

C12Q 1/6813 + **C12Q 2525/301** + **C12Q 2563/155**

Citation (search report)

- [A] WO 2018031407 A1 20180215 - WISTAR INST [US]
- [XAI] HALVARSSON CAMILLA ET AL: "Pyruvate dehydrogenase kinase 1 is essential for transplantable mouse bone marrow hematopoietic stem cell and progenitor function", PLOS ONE, vol. 112, no. 2, 9 February 2017 (2017-02-09), pages e0171714, XP055778222, DOI: 10.1371/journal.pone.0171714 & HALVERSSON CAMILLA: "S2 Table", 9 February 2017 (2017-02-09), XP055929018, Retrieved from the Internet <URL:https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5300157/> [retrieved on 20220608]
- [XII] HE JUNMING ET AL: "Stage-specific requirement of kinase PDK1 for NK cells development and activation", CELL DEATH & DIFFERENTIATION, NATURE PUBLISHING GROUP, GB, vol. 26, no. 10, 8 January 2019 (2019-01-08), pages 1918 - 1928, XP036878934, ISSN: 1350-9047, [retrieved on 20190108], DOI: 10.1038/S41418-018-0263-8
- [XAI] PENG F ET AL: "Glycolysis gatekeeper PDK1 reprograms breast cancer stem cells under hypoxia", ONCOGENE, vol. 37, no. 8, 22 February 2018 (2018-02-22), London, pages 1062 - 1074, XP055928985, ISSN: 0950-9232, Retrieved from the Internet <URL:https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5851116/pdf/onc2017368a.pdf> DOI: 10.1038/onc.2017.368
- [A] MURATA YUKI ET AL: "Preparation of cationized gelatin nanospheres incorporating molecular beacon to visualize cell apoptosis", SCIENTIFIC REPORTS, vol. 8, no. 1, 4 October 2018 (2018-10-04), XP055778242, Retrieved from the Internet <URL:http://www.nature.com/articles/s41598-018-33231-2> DOI: 10.1038/s41598-018-33231-2
- See references of WO 2020261569A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 3992301 A1 20220504; **EP 3992301 A4 20220720**; JP 7484906 B2 20240516; JP WO2020261569 A1 20201230; US 2022315978 A1 20221006; WO 2020261569 A1 20201230

DOCDB simple family (application)

EP 19935362 A 20190628; JP 2019025952 W 20190628; JP 2021527306 A 20190628; US 201917596916 A 20190628